## 2001 305(b) Summary Report (1999 data) Inland Lakes

In all, 369 lakes representing 156,994 acres were assessed. Overall lake use was fully or partially attained on 97.6 percent of the number and 97.4 percent of the acreage assessed.

Statewide Overall Use Support - All Lakes.

| Degree of       | A         | Total Lakes Assessed |        |        |        |       |         |       |
|-----------------|-----------|----------------------|--------|--------|--------|-------|---------|-------|
| Overall Use     | Monitored |                      | Evalu  | ıated  | ]      |       |         |       |
| Support         | Number    | Acres                | Number | Acres  | Number | %     | Acres   | %     |
| Full            | 69        | 21,419               | 80     | 5,559  | 149    | 40.4  | 26,978  | 17.2  |
| Full/Threatened | 1         | 811                  | 3      | 322    | 4      | 1.1   | 1,133   | 0.7   |
| Partial         | 109       | 92,696               | 98     | 32,078 | 207    | 56.1  | 124,774 | 79.5  |
| Nonsupport      | 2         | 1919                 | 7      | 2,190  | 9      | 2.4   | 4,109   | 2.6   |
| TOTAL           | 181       | 116,845              | 188    | 40,149 | 369    | 100.0 | 156,994 | 100.0 |

Statewide Individual Use Support - All Lakes.

| Degree of<br>Support | Fish<br>Consumption<br>Use |         | Í   | uatic<br>Life<br>Use |     | nming<br>Jse | W  | nking<br>ater<br>Jse |     | eation<br>(se |
|----------------------|----------------------------|---------|-----|----------------------|-----|--------------|----|----------------------|-----|---------------|
|                      | #                          | Acres   | #   | Acres                | #   | Acres        | #  | Acres                | #   | Acres         |
| Full                 | 95                         | 96,537  | 293 | 88,177               | 133 | 23,847       | 48 | 63,505               | 56  | 6,740         |
| Partial              | 9                          | 19,207  | 59  | 64,806               | 182 | 117,197      | 18 | 11,580               | 260 | 128,333       |
| Nonsupport           | 2                          | 5,275   | 0   | 0                    | 37  | 11,939       | 0  | 0                    | 36  | 17,910        |
| TOTAL                | 106                        | 121,019 | 352 | 152,983              | 352 | 152,983      | 66 | 75,085               | 352 | 152,983       |

**Trophic Status - All Lakes.** 

| Trophic State  | Total Assessed |       |         |       |  |  |  |
|----------------|----------------|-------|---------|-------|--|--|--|
|                | Number         | %     | Acres   | %     |  |  |  |
| Oligotrophic   | 5              | 1.4   | 205     | 0.1   |  |  |  |
| Mesotrophic    | 41             | 11.1  | 5,752   | 3.7   |  |  |  |
| Eutrophic      | 223            | 60.4  | 90,312  | 57.5  |  |  |  |
| Hypereutrophic | 83             | 22.5  | 56,714  | 36.1  |  |  |  |
| Unassessed     | 17             | 4.6   | 4,011   | 2.6   |  |  |  |
| TOTAL          | 369            | 100.0 | 156,994 | 100.0 |  |  |  |

#### **Lake Trends**

|             | Number | %     | Acres   | %     |
|-------------|--------|-------|---------|-------|
| Improving   | 24     | 6.5   | 23,389  | 14.9  |
| Stable      | 64     | 17.3  | 20,927  | 13.3  |
| Fluctuating | 141    | 38.2  | 60,355  | 38.4  |
| Declining   | 26     | 7.1   | 14,569  | 9.3   |
| Unassessed  | 114    | 30.9  | 37,754  | 24.1  |
| TOTAL       | 369    | 100.0 | 156,994 | 100.0 |

## **Statewide Causes of Impairment for All Lakes**

(Causes of impairment for all lakes not achieving "full" support)

| Causes Category                      | Total  | Impact  |
|--------------------------------------|--------|---------|
|                                      | Number | Acres   |
| Priority Organics                    | 34     | 29,878  |
| PCBs                                 | 7      | 15,457  |
| Metals                               | 10     | 7,160   |
| Unionized Ammonia                    | 11     | 6,475   |
| Nutrients                            | 165    | 125,272 |
| pH                                   | 22     | 10,056  |
| Siltation                            | 112    | 106,960 |
| Organic Enrichment/Low D.O.          | 47     | 88,313  |
| Salinity/TDS/Chlorides               | 1      | 26      |
| Habitat Alterations                  | 2      | 1980    |
| Pathogens                            | 1      | 4040    |
| Suspended Solids                     | 90     | 103,287 |
| Noxious Aquatic Plants               | 79     | 65,053  |
| Excessive Algae Growth/Chlorophyll a | 137    | 62,699  |
| Exotic Species                       | 7      | 440     |
| Cause Unknown                        | 11     | 510     |

# Statewide Sources of Use Impairment for All Lakes

(Sources of impairment for all lakes not achieving "full" support)

| (Sources of impairment for all takes not achieving full support) |        |         |  |  |  |  |
|--|--------|---------|--|--|--|--|
| Sources Category   |        | Impact  |  |  |  |  |
|  | Number | Acres   |  |  |  |  |
| Industrial Point Sources   | 4      | 13,778  |  |  |  |  |
| Municipal Point Sources  | 6      | 28,784  |  |  |  |  |
| Agriculture  | 169    | 123,647 |  |  |  |  |
| Off-farm Animal Holding/Management Area                          | 1      | 23      |  |  |  |  |
| Silviculture   | 3      | 11      |  |  |  |  |
| Construction   | 46     | 5,831   |  |  |  |  |
| Urban Runoff/Storm Sewers  | 87     | 43,669  |  |  |  |  |
| Resource Extraction  | 3      | 19,006  |  |  |  |  |
| Land Disposal  | 39     | 20,852  |  |  |  |  |
| Hydromodification  | 14     | 7,149   |  |  |  |  |
| Habitat Modification (other than Hydromod.)                      | 115    | 110,747 |  |  |  |  |
| Other  |        |         |  |  |  |  |
| Highway Maintenance and Runoff                                   | 7      | 26,143  |  |  |  |  |
| Spills   | 1      | 40      |  |  |  |  |
| Contaminated Sediments   | 85     | 91,464  |  |  |  |  |
| Natural Sources  | 7      | 7,752   |  |  |  |  |
| Recreational and Tourism Activities                              | 45     | 94,602  |  |  |  |  |
| Groundwater Loadings   | 1      | 5       |  |  |  |  |
| Waterfowl  | 33     | 11,679  |  |  |  |  |
| Lake Fertilization   | 5      | 424     |  |  |  |  |
| Herbicide/Algicide Application                                   | 3      | 527     |  |  |  |  |
| Forest/Grassland/Parkland  | 105    | 107,044 |  |  |  |  |
| Source Unknown   | 14     | 4,635   |  |  |  |  |

# 2001 305(b) Summary Report (1999 data) Significant Publicly-Owned Lakes

#### **Overall Use Support**

For significant publicly-owned lakes, 213 lakes representing 127,163 acres were assessed. Overall lake use was fully or partially attained on 98.1 percent of the number and 97.0 percent of the acreage assessed.

Statewide Overall Use Support Significant Publicly-Owned Lakes

| Degree of       | A         | Assessmen | t Categor | Total Assessed |        |       |         |       |
|-----------------|-----------|-----------|-----------|----------------|--------|-------|---------|-------|
| Overall Use     | Monitored |           | Evaluated |                | 7      |       |         |       |
| Support         | Number    | Acres     | Number    | Acres          | Number | %     | Acres   | %     |
| Full            | 59        | 13,798    | 26        | 1,518          | 85     | 39.9  | 15,316  | 12.0  |
| Full/Threatened | 1         | 811       | 1         | 7              | 2      | 0.9   | 818     | 0.6   |
| Partial         | 96        | 79,570    | 26        | 27,696         | 122    | 57.3  | 107,266 | 84.4  |
| Nonsupport      | 2         | 1,919     | 2         | 1,844          | 4      | 1.9   | 3,763   | 3.0   |
| TOTAL           | 158       | 96,098    | 55        | 31,065         | 213    | 100.0 | 127,163 | 100.0 |

Statewide Individual Use Support Significant Publicly-Owned Lakes

| Degree of<br>Support | Fish<br>Consumption |         | Aquatic<br>Life |         | Swir | nming   | Drinking<br>Water |        | Reci | eation  |
|----------------------|---------------------|---------|-----------------|---------|------|---------|-------------------|--------|------|---------|
|                      | #                   | Acres   | #               | Acres   | #    | Acres   | #                 | Acres  | #    | Acres   |
| Full                 | 80                  | 81,768  | 161             | 62,569  | 68   | 13,132  | 43                | 61,170 | 32   | 4,466   |
| Partial              | 6                   | 17,001  | 39              | 62,073  | 106  | 100,146 | 15                | 10,432 | 143  | 102,816 |
| Nonsupport           | 2                   | 5,275   | 0               | 0       | 26   | 11,364  | 0                 | 0      | 25   | 17,360  |
| TOTAL                | 88                  | 104,044 | 200             | 124,642 | 200  | 124,642 | 58                | 71,602 | 200  | 124,642 |

**Trophic Status - Significant Publicly-Owned Lakes** 

| Trophic State  | <b>Total Assessed</b> |       |         |       |  |  |  |
|----------------|-----------------------|-------|---------|-------|--|--|--|
|                | Number                | %     | Acres   | %     |  |  |  |
| Oligotrophic   | 1                     | 0.5   | 24      | 0.0   |  |  |  |
| Mesotrophic    | 26                    | 12.2  | 4,447   | 3.5   |  |  |  |
| Eutrophic      | 117                   | 54.9  | 65,499  | 51.5  |  |  |  |
| Hypereutrophic | 56                    | 26.3  | 54,672  | 43.0  |  |  |  |
| Unassessed     | 13                    | 6.1   | 2,521   | 2.0   |  |  |  |
| TOTAL          | 213                   | 100.0 | 127,163 | 100.0 |  |  |  |

**Trends - Significant Publicly-Owned Lakes** 

|             | Number | Number % Acres |         |               |  |
|-------------|--------|----------------|---------|---------------|--|
| Improving   | 13     | 6.1            | 22,714  | <b>%</b> 17.9 |  |
| Stable      | 44     | 20.7           | 15,849  | 12.5          |  |
| Fluctuating | 82     | 38.5           | 40,997  | 32.2          |  |
| Declining   | 15     | 7.0            | 13,655  | 10.7          |  |
| Unassessed  | 59     | 27.7           | 33,948  | 26.7          |  |
| TOTAL       | 213    | 100.0          | 127,163 | 100.0         |  |

### **Statewide Causes - Significant Publicly-Owned Lakes**

(Causes of impairment for all significant publicly-owned lakes not achieving "full" support)

| Causes Category                      | Tot    | al Impact |
|--------------------------------------|--------|-----------|
|                                      | Number | Acres     |
| Priority Organics                    | 31     | 29,264    |
| PCB's                                | 5      | 14,677    |
| Metals                               | 10     | 7,160     |
| Unionized Ammonia                    | 11     | 6,475     |
| Nutrients                            | 117    | 111,266   |
| рН                                   | 22     | 10,860    |
| Siltation                            | 70     | 92,216    |
| Organic Enrichment/Low D.O.          | 44     | 88,492    |
| Salinity/TDS/Chlorides               | 1      | 26        |
| Habitat Alterations                  | 1      | 1890      |
| Pathogens                            | 1      | 4040      |
| Suspended Solids                     | 75     | 93,761    |
| Noxious Aquatic Plants               | 35     | 61,727    |
| Excessive Algae Growth/Chlorophyll a | 105    | 52,415    |
| Exotic Species                       | 1      | 61        |
| Cause Unknown                        | 2      | 45        |

## **Statewide Sources - Significant Publicly-Owned Lakes**

(Sources of impairment for all significant publicly-owned lakes not achieving "full" support)

| Sources Category                            | Tota   | l Impact |
|---|--------|----------|
|   | Number | Acres    |
| Industrial Point Sources                    | 2      | 7,133    |
| Municipal Point Sources                     | 5      | 23,889   |
| Agriculture                                 | 107    | 109,809  |
| Off-farm Animal Holding/Management Area     | 1      | 23       |
| Construction                                | 18     | 4,028    |
| Urban Runoff/Storm Sewers                   | 44     | 35,842   |
| Resource Extraction                         | 2      | 18,924   |
| Land Disposal                               | 27     | 19,966   |
| Hydromodification                           | 11     | 7,121    |
| Habitat Modification (other than Hydromod.) | 76     | 97,910   |
| Other                                       |        |          |
| Highway Maintenance and Runoff              | 6      | 25,915   |
| Spills                                      | 1      | 40       |
| Contaminated Sediments                      | 46     | 82,459   |
| Natural Sources                             | 7      | 7,752    |
| Recreational and Tourism Activities         | 31     | 88,729   |
| Waterfowl                                   | 20     | 10,928   |
| Lake Fertilization                          | 5      | 424      |
| Herbicide / Algicide Application            | 2      | 299      |
| Forest/Grassland/Parkland                   | 80     | 95,954   |
| Source Unknown                              | 6      | 4,253    |

# 2001 305(b) Summary Report (1999 data) Rivers and Streams

The overall use support of rivers and streams was assessed and summarized for this report. A total of 15,570 stream miles were assessed. Overall stream use was fully or partially attained on 98.6 percent of the stream miles assessed.

#### **Statewide Overall Use Support - Rivers and Streams (miles)**

| Degree of Overall Use<br>Support | Assessment         | Category           | Total             | % of Total<br>Miles |
|----------------------------------|--------------------|--------------------|-------------------|---------------------|
|                                  | Monitored<br>Miles | Evaluated<br>Miles | Assessed<br>Miles |                     |
| Full                             | 7,766              | 2,019              | 9,785             | 62.8                |
| Full/Threatened                  | 64                 | 11                 | 75                | 0.5                 |
| Partial                          | 3,623              | 1,874              | 5,497             | 35.3                |
| Nonsupport                       | 125                | 88                 | 213               | 1.4                 |
| TOTAL                            | 11,578             | 3,992              | 15,570            | 100.0               |

#### **Statewide Individual Use Support - Rivers and Streams (miles)**

| Degree of<br>Support | Aquatic<br>Life<br>Use | Fish<br>Consumption<br>Use | Swimming<br>Use | Secondary<br>Contact<br>Recreation<br>Use | Drinking<br>Water<br>Use |
|----------------------|------------------------|----------------------------|-----------------|---|--------------------------|
| Full                 | 9,723                  | 2,945                      | 848             | 38  | 986                      |
| Full/Threatened      | 75                     | 0                          | 0               | 0   | 0                        |
| Partial              | 5,550                  | 830                        | 1,686           | 41  | 374                      |
| Nonsupport           | 222                    | 200                        | 715             | 3   | 0                        |
| TOTAL                | 15,570                 | 3,975                      | 3,249           | 82  | 1,360                    |

### **Statewide Causes of Impairment for Rivers and Streams**

(Causes of impairment for rivers and streams not achieving "full" support)

| Causes Category                       | <b>Total Miles</b> |  |
|---------------------------------------|--------------------|--|
| Ammonia (unionized)                   | 92                 |  |
| Cause Unknown                         | 175                |  |
| Chlorine                              | 14                 |  |
| Cyanide                               | 123                |  |
| Excessive Algal                       | 58                 |  |
| Flow Alteration                       | 516                |  |
| Habitat Alterations (other than flow) | 3,082              |  |
| Metals                                | 1,717              |  |
| Nutrients                             | 3,443              |  |
| Oil and Grease                        | 20                 |  |
| Organic Enrichment/D.O.               | 2,929              |  |
| Other Inorganics (Fluoride)           | 45                 |  |
| Pathogens                             | 37                 |  |
| PCBs                                  | 101                |  |
| pН                                    | 641                |  |
| Priority Organics                     | 670                |  |
| Salinity/TDS/Chlorides                | 719                |  |
| Siltation                             | 2,368              |  |
| Sulfates                              | 361                |  |
| Suspended Solids                      | 1,717              |  |
| Thermal Modification                  | 22                 |  |

## Statewide Sources of Impairment for Rivers and Streams

(Sources of impairment for rivers and streams not achieving "full" support)

| Sources Category                                    | Total Miles |  |
|---|-------------|--|
| Industrial Point Source                             | 366         |  |
| Municipal Point Source                              | 1,595       |  |
| Combined Sewer Overflow                             | 357         |  |
| Collection System Failure                           | 26          |  |
| Wildcat Sewer                                       | 18          |  |
| Agriculture   | 4,535       |  |
| Animal Holding/Management Areas                     | 514         |  |
| Construction  | 241         |  |
| Urban Runoff/Storm Sewers                           | 988         |  |
| Resource Extraction                                 | 1,098       |  |
| Land Disposal                                       | 38          |  |
| Hydromodification                                   | 2,861       |  |
| Habitat Modification (other than Hydromodification) | 776         |  |
| Atmospheric Deposition                              | 7           |  |
| Highway Maintenance/Runoff                          | 53          |  |
| Contaminated Sediments                              | 313         |  |
| Natural Sources                                     | 137         |  |
| Other   | 113         |  |
| Source Unknown                                      | 462         |  |